

CLAIMS

We claim at least the following: .

1. A cleaning composition, comprising:
 - about 20% to about 95% of a builder;
 - about 0.2% to about 20% of a surfactant;
 - about 5% to about 80% of a hydrotrope;
 - about 1% to about 30% of a water conditioner;
 - about 0.1% to about 20% of an alkali; and
 - about 0.5% to about 95% of a processing aid.
2. The cleaning composition of claim 1, wherein the cleaning composition includes:
 - about 20% to about 50% of a builder;
 - about 0.2% to about 20% of a surfactant;
 - about 20% to about 40% of a hydrotrope;
 - about 1% to about 15% of a water conditioner;
 - about 0.1% to about 15% of an alkali; and
 - about 0.5% to about 80% of a processing aid.
3. The cleaning composition of claim 1, wherein the builder is selected from the group of compounds consisting of: starch, sodium metasilicate, monosodium phosphate, disodium phosphate, trisodium phosphate, sodium tripolyphosphate, sodium sulfate, sodium borate, sodium carbonate, sodium hydrogen carbonate, sodium sesquicarbonate, sodium

metasilicate, sodium orthosilicate, sodium sesquisilicate, sodium polysilicates, alkaline sodium silicate, and neutral sodium silicate.

4. The cleaning composition of claim 1, wherein the hydrotrope is selected from the group of compounds consisting of: sodium xylene sulfonate, sodium toluenesulfonate, surfactant-hydrotropes, and urea.
5. The cleaning composition of claim 1, wherein the water conditioner is selected from the group of compounds consisting of: chelating modifiers, sequestering modifiers, crystal modifiers, polymaleic acid, polyacrylate, ethylenediaminetetraacetic acid, nitrilotriacetic acid, sodium citrate, sodium gluconate, and sodium glucoheptonate.
6. The cleaning composition of claim 1, wherein the alkali is selected from the group of compounds consisting of: sodium hydroxide, potassium hydroxide, monoethylamine, diethylamine, triethylamine, monomethylamine, dimethylamine, trimethylamine, isopropylamine, diisopropylamine, isopropanolamine, diisopropanolamine, triisopropanolamine, monoethanol amine, diethanolamine, triethanolamine, ammonium hydroxide, sodium aluminate, calcium oxide, magnesium oxide, calcium hydroxide, and magnesium hydroxide.
7. The cleaning composition of claim 1, wherein the processing aids is selected from the group of compounds consisting of: carboxymethylcellulose sodium alginate, monosaccharides, disaccharides, trisaccharides, tetrasaccharides, pentasaccharides,

hexassaccharides, heptasaccharides, octasaccharides, monasaccharides, gums, guar gums, xanthan, polymethacrylate, polyethylacrylate, mixed polyacrylate-polymalate, and polyacrylic acid partial sodium salt.

8. The cleaning composition of claim 1, wherein the surfactant is selected from the group of compounds consisting of: anionic detergents, cationic detergents, phosphate ester detergents, non-ionic detergents, ether sulfate detergents, amphoteric detergents, sodium soaps of fatty acids, sodium soaps of fatty acid esters, potassium soaps of fatty acids, potassium soaps of fatty acid esters, lard, tall oil, coconut fatty acid, stearic acid, oleic acid, and palmitic acid.
9. The cleaning composition of claim 1, wherein the cleaning composition can be diluted in a solvent to prepare a cleaning composition solution.
10. A cleaning composition, comprising:

about 0.2% to about 25% of a surfactant; and
at least one compound selected from: about 5% to about 99% of a builder, about 5% to about 95% of a hydrotrope, about 2% to about 60% of a water conditioner, about 0.1% to about 35% of an alkali, and about 2% to about 85% of a processing aid.
11. The cleaning composition of claim 10, wherein the cleaning composition includes:

about 0.2% to about 25% of a surfactant;
about 5% to about 99% of a builder; and

at least one compound selected from: about 5% to about 95% of a hydrotrope, about 2% to about 60% of a water conditioner, about 0.1% to about 35% of an alkali, and about 2% to about 85% of a processing aid.

12. The cleaning composition of claim 10, wherein the cleaning composition includes:
 - about 0.2% to about 25% of a surfactant;
 - about 0.5% to about 99% of a alkali; and
 - at least one material selected from: about 5% to about 99% of a hydrotrope, about 2% to about 85% of a water conditioner, and about 2% to about 95% of a processing aid.
13. The cleaning composition of claim 10, wherein the cleaning composition includes:
 - about 0.2% to about 20% of a surfactant;
 - about 5% to about 99% of a hydrotrope; and
 - at least one material selected from: about 2% to about 49% of a water conditioner and about 2% to about 85% of a processing aid.
14. The cleaning composition of claim 10, wherein the cleaning composition includes:
 - about 0.2% to about 20% of a surfactant;
 - about 35% to about 49% of a water conditioner; and
 - about 1% to about 95% of a processing aid.
15. The cleaning composition of claim 10, wherein the builder is selected from the group of compounds consisting of: starch, sodium metasilicate, monosodium phosphate, disodium

phosphate, trisodium phosphate, sodium tripolyphosphate, sodium sulfate, sodium borate, sodium carbonate, sodium hydrogen carbonate, sodium sesquicarbonate, sodium metasilicate, sodium orthosilicate, sodium sesquisilicate, sodium polysilicates, alkaline sodium silicate, and neutral sodium silicate.

16. The cleaning composition of claim 10, wherein the hydrotrope is selected from the group of compounds consisting of: sodium xylene sulfonate, sodium toluenesulfonate, surfactant-hydrotropes, and urea.
17. The cleaning composition of claim 10, wherein the water conditioner is selected from the group of compounds consisting of: chelating modifiers, sequestering modifiers, crystal modifiers, polymaleic acid, polyacrylate, ethylenediaminetetraacetic acid, nitrilotriacetic acid, sodium citrate, sodium gluconate, and sodium glucoheptonate.
18. The cleaning composition of claim 10, wherein the alkali is selected from the group of compounds consisting of: sodium hydroxide, potassium hydroxide, monoethylamine, diethylamine, triethylamine, monomethylamine, dimethylamine, trimethylamine, isopropylamine, diisopropylamine, isopropanolamine, diisopropanolamine, triisopropanolamine, monoethanol amine, diethanolamine, triethanolamine, ammonium hydroxide, sodium aluminate, calcium oxide, magnesium oxide, calcium hydroxide, and magnesium hydroxide.

19. The cleaning composition of claim 10, wherein the processing aids is selected from the group of compounds consisting of: carboxymethylcellulose sodium alginate, monosaccharides, disaccharides, trisaccharides, tetrasaccharides, pentasaccharides, hexassaccharides, heptasaccharides, octasaccharides, monasaccharides, gums, guar gums, xanthan, polymethacrylate, polyethylacrylate, mixed polyacrylate-polymalate, and polyacrylic acid partial sodium salt.
20. The cleaning composition of claim 10, wherein the surfactant is selected from the group of compounds consisting of: anionic detergents, cationic detergents, phosphate ester detergents, non-ionic detergents, ether sulfate detergents, amphoteric detergents, sodium soaps of fatty acids, sodium soaps of fatty acid esters, potassium soaps of fatty acids, potassium soaps of fatty acid esters, lard, tall oil, coconut fatty acid, stearic acid, oleic acid, and palmitic acid.
21. The cleaning composition of claim 10, wherein the cleaning composition can be diluted in a solvent to prepare a cleaning composition solution.
22. The cleaning composition of claim 1, wherein the builder comprises a builder salt, wherein the cationic species of the salt is selected from: sodium, potassium, calcium, magnesium, zinc, aluminum, barium, beryllium, ammonium, and lithium.

23. The cleaning composition of claim 1, wherein the hydrotrope comprises a hydrotrope salt, wherein the cationic species of the salt is selected from: sodium, potassium, calcium, magnesium, zinc, aluminum, barium, beryllium, ammonium, and lithium.
24. The cleaning composition of claim 1, wherein the water conditioner comprises a water conditioner salt, wherein the cationic species of the salt is selected from: sodium, potassium, calcium, magnesium, zinc, aluminum, barium, beryllium, ammonium, and lithium.
25. The cleaning composition of claim 1, wherein the alkali comprises an alkali salt, wherein the cationic species of the salt is selected from: sodium, potassium, calcium, magnesium, zinc, aluminum, barium, beryllium, ammonium, and lithium.
26. The cleaning composition of claim 1, wherein the processing aid comprises a processing aid salt, wherein the cationic species of the salt is selected from: sodium, potassium, calcium, magnesium, zinc, aluminum, barium, beryllium, ammonium, and lithium.
27. The cleaning composition of claim 1, wherein the surfactant comprises a surfactant salt, wherein the cationic species of the salt is selected from: sodium, potassium, calcium, magnesium, zinc, aluminum, barium, beryllium, ammonium, and lithium.
28. The cleaning composition of claim 10, wherein the builder comprises a builder salt, wherein the cationic species of the salt is selected from: sodium, potassium, calcium, magnesium, zinc, aluminum, barium, beryllium, ammonium, and lithium.

29. The cleaning composition of claim 10, wherein the hydrotrope comprises a hydrotrope salt, wherein the cationic species of the salt is selected from: sodium, potassium, calcium, magnesium, zinc, aluminum, barium, beryllium, ammonium, and lithium.
30. The cleaning composition of claim 10, wherein the water conditioner comprises a water conditioner salt, wherein the cationic species of the salt is selected from: sodium, potassium, calcium, magnesium, zinc, aluminum, barium, beryllium, ammonium, and lithium.
31. The cleaning composition of claim 10, wherein the alkali comprises an alkali salt, wherein the cationic species of the salt is selected from: sodium, potassium, calcium, magnesium, zinc, aluminum, barium, beryllium, ammonium, and lithium.
32. The cleaning composition of claim 10, wherein the processing aid comprises a processing aid salt, wherein the cationic species of the salt is selected from: sodium, potassium, calcium, magnesium, zinc, aluminum, barium, beryllium, ammonium, and lithium.
33. The cleaning composition of claim 10, wherein the surfactant comprises a surfactant salt, wherein the cationic species of the salt is selected from: sodium, potassium, calcium, magnesium, zinc, aluminum, barium, beryllium, ammonium, and lithium.